

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
STATEMENT OF MR. T. M. KING		
	My name's T. M. King. I live in Bath, South Carolina. Concerned citizens, gentlemen; I won't go into the warmongering thing here, and I personally do not believe that these weapons are necessary, but we'll skip all that, you've heard it before.	
I-1	An honest EIS is needed for the SRP because of the leaking, hazardous waste, and non-hazardous, or so-called non-hazardous waste, from both above-ground storage tanks and seepage basins entering into the CSRA water supply and aquifer, and numerous radioactive gas releases, which most of them have not been reported to the public and Aiken.	<p>The EIS will present a characterization of existing hazardous, low-level radioactive, and mixed waste sites at the SRP (Appendix B), including an assessment of groundwater contamination and health effects of alternatives for remedial and closure actions at these waste sites (Chapter 4).</p> <p>The storage and immobilization of high-level radioactive waste in waste tanks is not within the scope of this EIS. These subjects have been discussed extensively in the following documents:</p> <ul style="list-style-type: none"> • <u>Final Environmental Impact Statement, Waste Management Operations, Savannah River Plant, Aiken, South Carolina</u>, ERDA-1537, September 1977. • <u>Final Environmental Impact Statement, Long-Term Management of Defense High-Level Radioactive Wastes, Savannah River Plant, Aiken, South Carolina</u>, DOE/EIS-0023, November 1979. • <u>Final Environmental Impact Statement (Supplement to ERDA-1537, September 1977), Waste Management Operations, Savannah River Plant, Aiken, South Carolina</u>, DOE/EIS-0062, April 1980. • <u>Final Environmental Impact Statement, Defense Waste Processing Facility, Savannah River Plant, Aiken, South Carolina</u>, DOE/EIS-082, February 1982.

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		Releases of radioactive material and their impacts on the population within a 50-mile radius from the Savannah River Plant and downstream consumers of Savannah River water are published in an annual series of reports available to the public, entitled <u>Environmental Monitoring in the Vicinity of the Savannah River Plant</u> . The most recent of these reports is for 1984.
I-2	<p>This environmental impact should be taken a step further by including a study on the health effects of citizens living in the areas around the SRP.</p> <p>In a '76 study, conducted by DuPont, revealed a sixty percent excess incidence of lung cancer, and I repeat that; a sixty percent excess incidence of lung cancer. And a hundred and fourteen percent higher than average leukemia rate at the SRP site.</p>	The EIS will discuss the potential health effects of alternatives for existing waste sites in Section 4.2, alternatives for new disposal facilities in Section 4.3, and alternatives for disassembly-basin purge water in Section 4.4.
I-3	I strongly recommend this area health study be taken independently, hopefully with funds provided by the Government, if possible.	A review of the feasibility and usefulness of conducting further epidemiologic studies of delayed health effects around the SRP was undertaken by a panel organized by the Centers for Disease Control of the U.S. Department of Health and Human Services. The review and recommendations of the panel are documented in a report entitled, <u>Epidemiologic Projects Considered Possible to Undertake in Populations Around the Savannah River Plant</u> . Public comments and responses and DOE's final position regarding the panel's recommendations are documented in <u>Public Comment and Meeting Report, A Centers for Disease Control Review Panel's Recommendations on Health Effects and Epidemiological Studies of Operations at the Savannah River Plant, Aiken, South Carolina</u> , DOE/ER-0225, May 1985.
I-4	<p>and, also, that something be done about the transportation of this nuclear waste traveling the city streets of Aiken, South Carolina, congested small streets, not to mention the highways, and even parking across the street at the Burger King. I think it's gone a little too far. This is spaceship Earth. Let's don't foul our own nests.</p> <p>Thank you.</p>	See the response to comment A-15.

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STATEMENT OF MARY LOU SEYMOUR		
	<p>My name is Mary Lou Seymour. I'm a resident of Aiken County, I live in Bath. I am today representing the CSRA Health Project, which is a group of citizens from the CSRA, and our main interest is getting an independent health study done.</p>	
J-1	<p>We have come and testified several times at epidemiological meetings, and all this kind of stuff, and we haven't seen anybody want to do a health study of the residents of the area.</p> <p>Many of our members have been affected by working at the plant, physically, and many have died, and we talk to people every day that have cancers and leukemia, and we think this should be documented. Now, I don't know if this is in the scope of an environmental impact study, but I think that people's health, that's part of the environment, too. It's the environment that's causing that.</p> <p>And we would like, once again, to urge that a study be done of the residents of the area, and maybe y'all won't find anything. Well, that would be wonderful. We could all sleep quietly at night. But I don't...I don't know, from the way they never want to do it, it makes us think that there is something wrong, and we would sincerely like to urge you to put all possible efforts to doing a health study of this area.</p> <p>Thank you.</p>	See the response to comment I-3.

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	<p>STATEMENT OF HANS NEUHAUSER Coastal Director Georgia Conservancy</p>	
	<p>Thank you. I am Hans Neuhauser. I am Coastal Director of the Georgia Conservancy with offices in Savannah.</p>	
	<p>The Georgia Conservancy is a statewide membership organization that is concerned about the quality of the environment in the State of Georgia and in adjacent areas.</p>	
	<p>Our concern relates in large measure to our membership which includes individuals who live along the Savannah River, both in the Augusta area and in the Savannah area.</p>	
	<p>First of all, I would like to thank the Department of Energy for complying with the National Environmental Policy Act and holding this and other scoping meetings on this proposal.</p>	
	<p>I believe that the Department of Energy has learned its lesson from the L-Reactor and from the litigation and the Congressional action that went along with that issue.</p>	
	<p>And I think the opportunity for citizens to participate in providing suggestions on this proposal will in the long run be beneficial for the Department of Energy and the operation of the Savannah River Plant.</p>	
	<p>The concerns that our organization have, I believe, mirror the concerns that have been expressed by others relating to groundwater and surface water contamination.</p>	
K-1	<p>In Georgia, we are dependent on a number of aquifers and on the Savannah River for drinking water and industrial process water, and we need to make sure that these water supplies remain clean and useful for the people of Georgia, not only now but in the future, and so we urge the Department of Energy to take all necessary steps to prevent groundwater and surface water contamination, and in those areas where there has already been contamination, to take all necessary actions to remove that contamination.</p>	<p>The EIS discusses the impacts to surface-water and groundwater quality from remedial and closure actions at existing waste sites in Section 4.2, from new disposal facilities in Section 4.3, and the discharge of disassembly-basin purge water in Section 4.4. Cumulative surface-water and groundwater quality impacts are presented in Section 4.7.</p>

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K-2	We are also concerned about such things as endangered species, like the woodstork. Many of these have been identified in other scoping process documents.	Potential impacts to endangered species are discussed in Sections 4.2, 4.3, 4.4, and 4.7. Chapter 6 discusses the status of any required consultations in accordance with the Endangered Species Act.
K-3	We would like to urge the Department of Energy to comply with the Resource Conservation and Recovery Act in developing this environmental impact statement. It has been indicated by others that on occasion the Department of Energy has attempted to circumvent compliance with the Resource Conservation and Recovery Act by hiding under the provisions of the Atomic Energy Act, and we feel that both the States of South Carolina and Georgia would benefit from the Department of Energy's voluntary compliance with all the requirements of that act.	Chapter 6 discusses the applicable Federal and State regulatory requirements for the proposed modifications of waste management activities at the SRP, including the requirements of the Resource Conservation and Recovery Act, as amended.
K-4	Finally, we would like to see incorporated into the Environmental Impact Statement analysis an evaluation of the opportunities for independent oversight of this activity. In our view, many of the organizations at the Savannah River Plant have been carried out in the past without adequate independent oversight, particularly by agencies that have the technical expertise to determine exactly what is being done. So we would like to see an analysis of an independent oversight role for such agencies as the Environmental Protection Agency, the South Carolina Department of Health and Environmental Control, the Georgia Environmental Protection Division and citizens' interests. This concern for citizen and independent agency oversight is not a minor issue with us, and it does not confine itself simply to the waste management issue. It is something that we believe is necessary for not only the Savannah River Plant operation but the entire nuclear developments in the Savannah River basin, and this position is endorsed by a broad range of citizens, including groups like the	Chapter 5 discusses groundwater monitoring activities at the SRP, including the relationship of these activities to State and EPA requirements. Also see the response to comment K-3.

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	Savannah Area Chamber of Commerce, so it is no small concern to us and the residents of this area.	
	In conclusion, again I would like to thank you for holding these meetings. I apologize that there are so few people who have come to express interest or concern about this, but again I think it is a tribute to the opening of the process that some of this lack of interest is due to. Thank you.	

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	<p>STATEMENT OF DR. ZOE TSAGOS League of Women Voters Northern Beaufort County</p> <p>PRESENTED BY THE LEAGUE OF WOMEN VOTERS OF NORTHERN BEAUFORT COUNTY AT A PUBLIC SCOPING HEARING FOR AN EIS ON WASTE MANAGEMENT AT SRP</p> <p>May 16, 1985</p> <p>I have appeared before you several times. However, for the record, I identify myself as Dr. Zoe Tsagos and I represent the League of Women Voters of Northern Beaufort County.</p> <p>The problem of ground water contamination and waste management practices at the SRP has come up at every public meeting which has been held by DOE which I have attended, originally on the start-up of the L-Reactor and then at the scoping meeting for the EIS. Today we are considering with you on what should be included in an EIS on Waste Management which is required by several recent legislative acts.</p>	
L-1	<p>According to a statement by DOE in May 1984, and according to the contents of the EIS on the L-Reactor the following, in brief, were proposals applied to ground water protection: to "construct a \$30 million waste water facility" by April 1985 in order to terminate the use of seepage basins; to pump out the already seeped chemical solvents from the Tuscaloosa Aquifer; to study and act to correct ground water problems on site; and to approach the problem of hazardous wastes in ground water.</p> <p>Now with an EIS in preparation, specifically on Waste Management, a greater analysis will be made on how DOE can bring about the above aims.</p>	<p>The referenced effluent treatment facility and groundwater withdrawal program are actions being taken at the SRP Fuel and Fabrication Area (M-Area) in accordance with the Supplemental Appropriations Act of 1984, Public Law 98-181. These actions, which have been approved and permitted, are discussed in Chapter 1.</p>
L-2	<p>Problems have arisen this past year in relation to waste management and ground water pollution. Perhaps the most significant has been the question as to whether mixed wastes, radioactive and non-radioactive, would be covered by law, specifically by the Resource Conservation and Recovery Act (RCRA) for on site storage and disposal in all nuclear weapons facilities.</p>	<p>Chapter 6 discusses applicable Federal and State regulatory requirements for the proposed modifications of waste management activities at the SRP, including the requirements of the Resource Conservation and Recovery Act, as amended, and the status and applicability of "mixed waste" regulations.</p>

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	<p>The case brought by the Natural Resources Defense Council (NRDC) and the Legal Environmental Assistance Foundation (LEAF) in the suit LEAF vs. Hodel on the Oak Ridge, Tennessee Plant challenging the position that mixed wastes must be exempted from RCRA supervision on the grounds of national security. On April 13, 1984, this position was held invalid by a ruling in a U.S. District Court in Tennessee.</p> <p>In a letter of June 14, 1984 by NRDC to William Ruckelshaus, the then Director of the Environmental Protection Agency (EPA), he was urged to accept the Tennessee court decision as precedent setting and that it be applied to all nuclear weapons facilities. On August 1, 1984, DOE conceded that RCRA requirements for treatment and storage of wastes apply to mixed wastes and that this interpretation has over-all application.</p> <p>We are in favor of this decision since it is a logical acceptance of the fact that mixed wastes cannot and should not be divided into their component parts for each of the regulatory agencies' jurisdiction. A quotation from the NRDC letter to Ruckelshaus puts it clearly:</p> <p style="padding-left: 40px;">There is no provision in RCRA permitting deregulating of hazardous wastes by mixing them with exempted materials, such as AEA (Atomic Energy Act) materials. Nor should there be, since such wastes become no less "hazardous" by virtue of their radioactive components.</p> <p>A further recommendation has been made by NRDC to EPA, namely that the contracting company, if any, be held responsible for complying with RCRA since they, the contractors/managers "are the ones actually generating, treating, storing and disposing of the wastes."</p> <p>We find this position logical and likely to expedite corrective measures on ground water waste management, as well as for other waste disposal such as solid, liquid etc. at SRP.</p>	

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	<p>A significant statement on agency jurisdiction is the following from the NRDC letter: "In the rare case where compliance with both sets of requirements is physically impossible, the burden is on DOE to demonstrate the inapplicability of RCRA."</p>	
	<p>The LWVUS in Convention in 1984 formed a Water Resources Task Force which will concern itself with the improvement of water quality in general in the nation and with lobbying for and supporting legislation which will best bring this improvement about. Special stress will be placed on the quality of ground water management.</p>	
	<p>We come now to the DOE notice for today's scoping meeting for the citizen input to an EIS on an SRP Waste Management Program "for the protection of ground water, human health and the environment."</p>	
	<p>In the DOE material sent to us on the Intent to Prepare an EIS, the background on Waste Management activities is touched upon, indicating how it started in 1952 and about the 1977 EIS on improved waste management operations. Now new regulatory requirements, one should add with many new regulating agencies and legislative acts, make certain changes necessary in the SRP Ground Water Management Program, especially because of the provisions of the RCRA and of the CERCLA (Comprehensive Environmental Response Compensation and Liability Act).</p>	
	<p>In an article in the <u>Beaufort Gazette</u> of May 14, 1985 under Fran Smith's by-line, she reports the present scoping meetings and she notes the following:</p>	
	<p>The Department of energy has identified 153 basins, pits, or piles of hazardous wastes on the 300-square mile tract that either do affect groundwater or could affect it. Some of them have been disposal sites for 30 years. The variety of materials includes mercury, volatile organic chemicals and acids.</p>	

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L-3	<p>The source of this data is not given. However, since the statement following, as well as the description of ground water pollution sites at SRP are ascribed to Jim Ferguson, director of S.C. DHEC, Bureau of Water Controls Compliance and Enforcement Division, he seems to be the source of the statement quoted above.</p> <p>We feel that although the time is fairly short when the 1977 Waste Management Program was established to the present, the 153 areas of real or potential ground water pollution is excessive if an ongoing inspection and correction program had been really in operation.</p>	<p>The identification of 153 waste sites at the SRP is contained in a document prepared by E. I. du Pont de Nemours and Company entitled, <u>Technical Summary of Groundwater Quality Protection Program at Savannah River Plant</u>, DPST-83-829, December 1983. Of the 153 sites, approximately 80 active and inactive sites contain hazardous, low-level radioactive, or mixed wastes. The EIS describes the required remedial and closure actions to be taken at these waste sites - at several sites remedial and closure actions will not be required - and assesses the environmental consequences of alternative actions at these sites in Chapter 4. Chapter 5 discusses the ongoing groundwater monitoring program at the SRP for the detection of contaminants.</p>
L-4	<p>Again quoting from the article by Fran Smith cited above, "The S.C. Water Resources Commission especially would like to have some cluster wells drilled outside the 300-square mile plant site to be used for groundwater testing, according to a spokesman." We recommend that this testing be carried out in view of the degreasing chemicals and possibly other pollutants which have reached into the Tuscaloosa Aquifer and for the protection of the health of the residents of the town of Jackson, in particular, which is only two and a half miles away from SRP.</p>	<p>Extensive groundwater sampling and modeling efforts are underway at the SRP. These programs, including groundwater monitoring outside the SRP, are discussed in Chapter 5.</p>
L-5	<p>In the DOE statement of April 19, 1985 on the Intent to Prepare an EIS for Waste Management at SRP, there is the following statement: "Projects are currently underway at SRP to comply with recently enacted RCRA and CERCLA (Comprehensive Environmental Response Compensation and Liability Act) regulatory requirements for groundwater protection and to protect public health and the environment." SCDHEC and EPA permits are also needed to work on this ground water program.</p> <p>We feel that with the acquiring of the required permits and authorizations, DOE, supported by the regulatory agencies both state and federal which are concerned in ground water usage, should be able to reach a more effective control of this very serious problem of ground water pollution which seems to have become dangerously widespread.</p>	<p>See the response to comment L-2.</p>

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L-6	<p>Two announcements in the press, both of them familiar to DOE, should be mentioned here. They were both Associated Press releases from Washington picked up by the <u>Beaufort Gazette</u>. The first, June 5, 1984, said that the SRP was chosen as "a preferred option" for the burial of radioactive nuclear engine rooms from retired navy submarines over a period of years as obsolescence set in.</p> <p>The second press release of February 21, 1985, is concerned with the plan to build a new reactor which would have state-of-the-art technology and the possible closing down of one of the older operating reactors at SRP when the new one is on stream.</p> <p>With programs such as these two possible in the not distant future, setting aside any consideration, at the present time of possible opposition to either or both of these two projected events on the part of individuals and organizations, ground water pollution becomes more menacing.</p> <p>Finally, we do not think that indicating our preference in "Alternatives" to be followed under different conditions for the solution of the ground water pollution problem would be of great value here, since we assume that the safest and most corrective methods will be chosen by DOE, DuPont, and the various agencies, state and federal, that have oversight at SRP. In this scoping material sent to us by DOE, obviously, the last alternative, in each case, of doing nothing is not acceptable.</p>	<p>The referenced programs either have been (decommissioned naval submarine reactor compartments) or will be (new production reactor) the subject of a separate NEPA review and are outside the scope of this EIS.</p>
L-7		<p>The No-Action strategy, which is required pursuant to the regulations of the Council on Environmental Quality [40 CFR 1502.14(d)], is discussed in the EIS for each set of alternatives considered (i.e., existing waste sites in Sections 2.2 and 4.2, new disposal facilities in Sections 2.3 and 4.3, and disassembly-basin purge water discharge in Sections 2.4 and 4.4). DOE identifies its preferred alternative for each set of alternatives in Sections 2.1 in accordance with 40 CFR 1502.14(e).</p>

Thank you, Mr. Chairman.

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Comment number	Comments	Responses
	<p>STATEMENT OF THE HONORABLE HARRIET H. KEYSERLING State Representative District, South Carolina</p>	
	<p>The last time I appeared at a Department of Energy hearing, I supported an environmental impact statement before the restart of the L-Reactor.</p> <p>My reasoning was that nuclear hazards are nuclear hazards, whether it be government produced or commercial, and if there is any danger in one kind of waste, there is the same in the other.</p> <p>Therefore, the same rules and regulation should hold for both. When I first became involved in the problems of nuclear waste, I was told by those who produced it I should be less concerned about nuclear wastes than chemical wastes, because there was more potential hazard and therefore more control over nuclear waste.</p> <p>I don't know about the first statement, that I need not be concerned about nuclear waste, but they were right about the problems which would and have surfaced about other chemical wastes and other hazardous wastes, so I come here today with the same statement as I made concerning the L-Reactor, to say that hazardous wastes are hazardous wastes, whether they be from government or commercial facilities.</p>	
M-1	<p>So the same rules and regulations which the federal government finds necessary for commercial waste should also apply to government as well radioactive and mixed wastes.</p> <p>I urge all the alternatives that you will consider be within existing regulatory requirements under the Resource Conservation and Recovery Act, the compensation and liability act, other federal laws, as well as South Carolina's laws and regulations.</p> <p>I also want to express my thanks for going through this EIS process and for giving the public an opportunity to give their views at this and other meetings. Thank you.</p>	<p>The EIS assesses the potential environmental effects of modifying waste management activities at the SRP for low-level radioactive, hazardous, and mixed wastes in compliance with applicable regulatory requirements, including the Resource Conservation and Recovery Act, as amended. Chapter 6 discusses the applicable Federal and State regulatory requirements for the proposed modification.</p>

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	<p>STATEMENT OF R. LEWIS SHAW</p> <p>SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL</p> <p>2600 Bull Street Columbia, SC 29201</p> <p>Commissioner Robert S. Jackson, M.D.</p> <p>Board Moses H. Clarkson, Jr., Chairman Gerald A. Kaynard, Vice-Chairman Oren L. Brady, Jr., Secretary Barbara P. Nuessle James A. Spruill, Jr. William H. Hester, M.D. Euta M. Colvin, M.D.</p> <p>May 28, 1985</p> <p>Mr. Charles G. Halstead Assistant Manager for Health, Safety and Environment US Department of Energy Savannah River Operations Office P.O. Box A Aiken, S.C. 29802</p> <p>Re: Comments on Scope of the Environmental Impact Statement on the Waste Management Activities for Groundwater Protection at the Savannah River Plant</p> <p>Dear Mr. Halstead:</p> <p>The Department appreciates the opportunity to provide comments on the above referenced subject. For your preparation of the EIS the Department presents the following items for consideration:</p>	
N-1	<p>1. Preparation of the EIS should not interfere with permitting and compliance activities, ongoing or future, required by the Department.</p>	<p>The purpose of the EIS is to assess the environmental consequences of modifying waste management activities at the SRP for hazardous, low-level radioactive, and mixed wastes in accordance with Section 102(2)(c) of the National Environmental Policy Act of 1969, as amended. If NEPA requirements conflict with the requirements of other applicable statutes, Sections 1.1 and 1.2 and Chapter 6 will discuss these conflicts.</p>

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N-2	2. The EIS should encompass all wastes sites which are required by the 1984 RCRA amendments to be investigated as "continuing release" sites.	The EIS considers existing hazardous, low-level radioactive, and mixed waste sites, regardless of their definition as "continuing release" sites.
N-3	3. The EIS should provide a description of all applicable laws, regulations and agreements for each existing and proposed hazardous, low-level radioactive, and mixed waste site.	Chapter 6 discusses the applicable Federal and State regulatory requirements for the proposed modifications of waste management activities at the SRP.
N-4	4. The EIS should discuss existing and future laws and regulations which govern remedial and closure actions and their relationship to the NEPA and Federal budget processes.	See the response to comment N-3. A discussion of future laws is outside the scope of the EIS.
N-5	5. The Department recommends that recycling, reuse, incineration or further treatment (to render waste less hazardous) receive a higher ranking than land based treatment, storage or disposal facilities as preferred alternatives for future management of hazardous waste.	Appendix D discusses predisposal techniques such as source control, incineration, compaction, and biological/chemical treatment.
N-6	6. The Department recommends that the EIS evaluate the feasibility of using off-site treatment, storage, or disposal facilities which may be better suited than new sites on the SRP.	The subject and alternatives of using offsite facilities for waste - particularly radioactive waste - was discussed in the <u>Final Environmental Impact Statement, Waste Management Operations, Savannah River Plant, Aiken, South Carolina</u> (ERDA-1537), and was dismissed due to cost and potential exposures due to transport.
N-7	In conclusion, the Department wishes to clarify that the preparation, or the EIS itself should not be construed to satisfy any existing State regulation or requirement.	Although this EIS is not a permit application, the DOE Record of Decision on the EIS will identify those actions to protect groundwater, human health, and the environment for which DOE will request the necessary approvals and permits for implementation.

Sincerely,

R. Lewis Shaw, P.E.
Deputy Commissioner
Environmental Quality Control

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RLS/lmj		
cc: Kim Hill		
Jim Joy		
Jim Ferguson		
Hartsill Truesdale		
Virgil Autrey		
Bill Culler		

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STATEMENT OF MARY T. KELLY, PRESIDENT		
LEAGUE OF WOMEN VOTERS of South Carolina		
May 24, 1985		
2838 Devine Street Columbia, S.C. 29205 Telephone: 771-0063		
Mr. Charles G. Halstead Assistant Manager for Health, Safety and Environment U.S. Department of Energy SRP Operations Office P.O. Box A Aiken, SC 29802		
Dear Mr. Halstead:		
The League of Women Voters of South Carolina appreciates this opportunity to help identify some of the issues which we think should be addressed in the proposed Environmental Impact Statement for waste management activities at the Savannah River Plant.		
0-1	Our organization believes that the operation at Savannah River in all aspects should have to comply with state and federal environmental laws and regulations for water quality, air quality, groundwater quality and protection, and hazardous waste management; and that representatives of state and federal regulatory agencies must be accorded full access for inspection and monitoring as well as complete cooperation. The implications for the health and safety of the citizens of this and neighboring states are too serious if such access and compliance are not guaranteed.	Chapter 6 discusses the applicable Federal and State regulatory requirements for the proposed modifications of waste management activities at the SRP. Chapter 5 discusses groundwater monitoring activities at the SRP, including the relationship of these activities to State and EPA requirements.
0-2	We realize that changing practices of the chemical industry are now mandating practices which are more health and environmentally protective than those followed in the 50's, 60's, and 70's. But we also realize that in the past certain practices which were widely followed were even then suspect. However, in the interests	Chapter 1 describes the approved actions being taken to eliminate the use of seepage basins, and Section 4.2 evaluates the environmental consequences of remedial and closure actions at existing hazardous, low-level radioactive, and mixed waste sites, including seepage basins.

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	of getting the job done, they were followed. The use of unlined seepage basins is a case in point, as well as the manner in which degreasing solvents and metallic pollutants were handled and allowed to enter the atmosphere, the sediment, and the groundwater.	
0-3	Consequently, we ask that any cost-benefit analysis that will lead to less than the best and most protective technology, be disallowed. The continued use of a seepage basin for the L-Reactor is a case in point.	The EIS identifies DOE's preferred alternatives in Chapter 2. The L-Reactor seepage basin was evaluated in the <u>Final Environmental Impact Statement, L-Reactor Operations, Savannah River Plant, Aiken, South Carolina</u> (DOE/EIS-0108), and SCDHEC subsequently concurred in its use. This seepage basin is outside the scope of this EIS.
0-4	Careful, professionally prepared specific comments have been submitted by Energy Research Foundation and the Natural Resources Defense Council. We ask that their suggestions receive the utmost consideration, as well as the contributions of others who have commented or testified. We request that this communication be included in the scoping record. Sincerely yours, Mary T. Kelly, President MTK:fb	See the responses to the comments A-1 through A-48 "A."

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STATEMENT OF GOVERNOR RILEY		
STATE OF SOUTH CAROLINA Office of the Governor		
Richard W. Riley Governor		
Post Office Box 11450 Columbia 29211		
May 20, 1985		
Mr. C. G. Halstead, Jr. Assistant Manager for Health, Safety and Environment United States Department of Energy Savannah River Operations Office Post Office Box A Aiken, South Carolina 29802		
Dear Mr. Halstead:		
I am writing in response to your announcement of "scoping" activities in support of the preparation of an Environmental Impact Statement (EIS) on waste management at the Savannah River Plant. The Memorandum of Agreement recently signed by the South Carolina Department of Health and Environmental Control and the United States Department of Energy seems to have improved communication between the two agencies, and you are to be commended for your current efforts to address waste management issues in a comprehensive manner.		
P-1	South Carolinians are understandably sensitive about waste storage and disposal within the state, particularly when waste has not been generated by in-state firms. Therefore, it is very important for the EIS to specify that the waste management activities undertaken at the Savannah River Plant will be solely for wastes generated at the site.	Sections 2.3 and 4.2.1 discuss waste material requiring disposal, including waste presently in storage, waste resulting from remedial and closure actions (at the SRP), and waste from ongoing operations.

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P-2	<p>South Carolinians are also concerned about what many perceive as a lack of quality control in waste management activities. I would like the EIS to include a full discussion of the quality assurance program designed to ensure the safety of the new waste management facilities. Such a program should not only include protection for "whistle blowers" but, more importantly, should incorporate positive incentives to encourage employees to call potential safety issues to the attention of top management personnel. Knowledge that potential hazards to human health or the environment will be promptly identified and eliminated is necessary to reassure those of us who have been alarmed by recent reports of improper waste management.</p> <p>I look forward to your keeping me informed as the EIS is developed.</p> <p>Yours sincerely,</p> <p>Richard W. Riley</p> <p>RWR:bd</p>	<p>Chapter 6 discusses those DOE Orders applicable to the identification and resolution of potential hazards to human health or the environment.</p>

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	<p>STATEMENT OF W. F. LAWLESS Assistant Professor of Mathematics Paine College</p> <p>PAINÉ COLLEGE 1235 Fifteenth Street (10) Augusta, Georgia 30910 404-722-4471</p> <p>May 31, 1985</p> <p>C. G. Halstead, Jr., Assistant Manager for Health, Safety, and Environment U.S. DOE - Savannah River Plant P.O. Box A Aiken, SC 29801</p> <p>Dear Mr. Halstead:</p> <p>As stated in my handwritten letter to you May 28th, hand delivered to your office the same day with my final scoping comments, per requirements stated in the <u>Federal Register</u> notice (50(81), April 26, 1985, p. 16534), this letter transmits a cleanly typed version of my final scoping comments on the proposed SRP Waste Management Activities EIS. Minor editorial changes differ from the copy provided May 28th, and a new conclusion statement, the 8th, has been added, however, no new information nor references have been added per our agreement.</p> <p>It has been a pleasure providing the enclosed comments, and it is hoped they will be of some value to the DOE. Thank you for the opportunity to comment, and for your assistance.</p> <p>Sincerely,</p> <p>W. F. Lawless, Assistant Professor of Mathematics</p>	

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SCOPING COMMENTS CONCERNING SAVANNAH RIVER PLANT
WASTE MANAGEMENT ACTIVITIES
ENVIRONMENTAL IMPACT STATEMENT

by

W. F. Lawless

Assistant Professor of Mathematics

Paine College

May 28, 1985

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
INTRODUCTION		
	<p>The Department of Energy (DOE) has initiated comments and suggestions to assist in identifying environmental issues and the scope of an environmental impact statement (EIS) on waste management activities for groundwater protection at the Savannah River Plant (SRP). Public comments are to be considered in the preparation of an EIS. An April 26, 1985 <u>Federal Register</u> identified the DOE intent to prepare such an EIS and included background information on the SRP; the notice also included alternatives for treating waste sites, for building new waste disposal facilities, and for discharging reactor basin purge water, plus the non-inclusive listing of SRP environmental issues (1).</p> <p>The comments herein were delivered in draft at the first DOE scoping meeting, held at the H. Odell Weeks Activity Center in Aiken, SC, May 14, 1985.</p>	
CONCLUSIONS		
Q-1	1. The proposed EIS should justify why an EIS is not being written for the national DOE Order 5820.2, Radioactive Waste Management, an Order that has and will have a much greater environmental impact on the nation and at SRP than the proposed action.	The subject of preparing an EIS for DOE Order 5820.2 is beyond the scope of this EIS.
Q-2	2. The new EIS should justify the continued use of seepage basins at SRP, natural soil columns that are extraordinarily expensive to clean up. Their continued use does not appear to be in the best interest of the public, nor does their use make good business and engineering sense.	The EIS assesses remedial and closure actions at hazardous, low-level radioactive, and mixed waste sites, including seepage basins, in Sections 2.2 and 4.2. The continued use of the C-, K-, and P-Reactor area seepage basins for disassembly-basin purge water is assessed in Sections 2.4 and 4.4. Also see the response to comment 0-3.
Q-3	3. Environmental Impact Statements (EIS) rely on complex predictions that are difficult to disprove. Independent peer review panels and the assessment of past predictions should in part correct this problem. EIS statements should no longer be treated as passive documents to be filed and never officially assessed.	As required by the regulations of the Council on Environmental Quality (40 CFR 1502.19), copies of the draft EIS will be provided to Federal and State agencies having special expertise on any environmental impact that might be involved.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-4	4. Release of contaminants on and off the SRP exceed DOE Concentration Guides, however no citations against excessive releases have been filed against the SRP prime contractor, DuPont. The groundwater clean up at SRP may well exceed \$250 million, paid for by the taxpayers. Yet, it appears that the prime contractor has been relieved of any financial obligations and penalties in the clean up. In fact, the prime contractor's contract was renewed in 1984.	Sections 2.2 and 4.3 and Appendix F discuss remedial and closure actions at hazardous, low-level radioactive, and mixed waste sites in relation to applicable Federal and State regulations, including DOE Orders.
Q-5	5. Public reviews of EIS statements are inadequate. The public is unqualified to review these complex, recondite documents, but a combination of independent peer review panels followed and coupled with public reviews may correct this problem, and may enhance the rigor and the quality of the final document.	See the response to comment Q-3.
Q-6	6. The DOE philosophy appears to be that cost is no object to cleaning up publicly identified environmental problems. This is inappropriate, bureaucratic in approach, and unprofessional at best. Although it is appropriate to correct an original lack of engineering and scientific insight it is time that the DOE bureaucracy become responsible in spending the millions of taxpayer dollars to manage radioactive and hazardous wastes. The contamination build-up problems in the M-Area seepage basin and other SRP seepage basins have been known for many years, yet other seepages are planned. This disregard by the DOE may be typical of a bureaucracy, but is no longer tolerable in this or any other society.	See the response to comment Q-2.
Q-7	7. The DOE should not be allowed to both self-regulate and manage radioactive wastes. The DOE lost the right to self-regulate hazardous chemical wastes in 1984 in a federal court suit filed in response to one of the largest industrial spills of mercury in the U.S. The \$64 million clean-up of the single M-Area radioactive and hazardous waste seepage basin at SRP implies that the DOE is not capable of safely managing and regulating either hazardous radioactive wastes.	Chapter 6 discusses the applicable Federal and State regulatory requirements for the proposed modifications of waste management activities at the SRP, including the requirements of the Resource Conservation and Recovery Act, as amended, and DOE Orders. Also see the response to comment Q-4.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-8	<p>8. The DOE tendency to publish vast amounts of apparently meaningless statistical information should be rigorously upgraded. Selected data from selected monitoring wells often do not adequately describe the data set, nor correlate to standards, nor fit with other selected data.</p>	<p>The preparation of the EIS complies with the provisions of the Council on Environmental Quality as contained in 40 CFR 1502.2, which require an EIS to focus on significant environmental issues and alternatives, while reducing the accumulation of extraneous background data and not being encyclopedic.</p>
	<p>GENERAL COMMENTS</p>	
Q-9	<p>1. <u>Savannah River Plant Seepage Basins</u> In August 1983, a hotline complaint was filed with the DOE Inspector General charging the DOE with willfully avoiding its public responsibility to prepare an EIS for the new DOE Order 5820.2, Radioactive Waste Management (2,3). Although the environmental impact of DOE Order 5820.2 is national in scope and is much greater than the proposed groundwater protection action for SRP waste management activities, the latter a local action versus a national action for the former, such an EIS has not been written (1). Nonetheless, the Department of Energy is to be congratulated on this very important and forthright action to prepare an EIS for Savannah River Plant waste management activities. It is hoped that similar actions will take place at all DOE sites throughout the nation, and that one day, an EIS will be written to cover DOE Order 5820.2. The new EIS planned for the Savannah River Plant will document many of the inadequacies of DOE Order 5820.2, a regulation that mocks American technology and one that epitomizes the mishandling of radioactive and hazardous wastes by the DOE bureaucracy. The new EIS will continue to focus on the corrective actions necessary to remediate the groundwater damage done by the DOE's use of seepage basins at SRP, basins still allowed by DOE Order 5820.2. The new EIS should justify why it is being written and why no EIS has been written for DOE Order 5820.2, a regulation that has and will have a quantifiably greater impact on the national environment than the proposed action.</p>	<p>The purpose of the EIS is stated in Section 1.2. Also see the response to comment Q-1.</p>

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-10	The SRP is cleaning up one of its 68 liquid waste seepage basins, the M-Area seepage basin (4). The General Accounting Office (GAO) has estimated that the M-Area seepage basin clean-up will cost up to \$64 million or more (4), yet the Savannah River Plant will be using a seepage basin when the L-Reactor comes on line in 1985 (5). The new EIS should carefully detail what seepage basins will continue to be used at the Savannah River Plant and for how long, the contaminants to be disposed of and where, the estimated contaminant build-up at each basin, the releases to each basin since start-up, the basins that are clogged to further liquid waste seepage and are overflowing, the current estimated clean-up cost for each basin, and the rationale for each basin's continued use.	See the responses to comments B-2 and Q-2.
Q-11	Seepage basins are one of the sources of hazardous and radioactive waste contamination of migratory fowl and animals at the SRP (6). Contaminated turtles have been known to leave and have been collected from off the Savannah River Plant site (6). The new EIS should quantify this phenomenon by detailing how each basin has possibly contributed to this means of spreading radioactive and hazardous contamination, and to where with what extent by what means (turtles, fish, fowl, plants, resuspension, etc.). The new EIS should review the steps SRP has taken to prevent the spread on and off plant of hazardous and radioactive contamination through all of the various possible pathways from each one of the 68 known seepage basins (7).	See the response to comment B-3.
Q-12	2. <u>Waste Management Practices.</u> The DOE "Intent to Prepare an Environmental Impact Statement" (1) states that a 1977 EIS on the SRP "...resulted in the implementation of a waste management practices improvement program in accordance with DOE policies and standards." This 1977 EIS (ERDA 1537) included many important predictions that have not been publicly assessed by the DOE and should be assessed in the new EIS (8). Many of these predictions have proven wrong, e.g., on the levels of contamination entering the groundwaters underlying the SRP radioactive waste burial grounds and the radioactive and hazardous waste seepage basins, and on how well protected the Tuscaloosa aquifer was from contaminated groundwaters above the Tuscaloosa aquifer (5, 6, 7, 8).	See the response to comment B-4.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-13	<p>The recondite interactions between DOE operations and the environment creates the need for an EIS to include many predictions of the impacts of these interactions, predictions based on both assumptions and complex equations not easily verified, especially during the short public review period of an EIS. Nor is the public qualified to review an EIS. These documents are replete with abstruse, technical processes and environmental systems that usually confound experts. The establishment of a competent, independent peer review for all environmental impact statements (EIS) with adequate review time and appropriate peer-review authority should become a-part of the EIS process. First, an EIS should verify or not, to the extent knowledge has been gained, each prediction made in previous EIS statements (in this case, ERDA 1537, DOE/EIS-0062, DOE/EIS-082, DOE/EIS-0108); second, an independent peer review panel should study the draft(s) and final EIS documents (other cognizant organizations and authorities should be included on the panel); third, a public review of the EIS documents and peer review comments should be conducted after the draft and final documents have been reviewed.</p>	See the responses to comments B-5, Q-3, and Q-8.
Q-14	<p>The SRP publishes annual monitoring reports on radioactive and hazardous contamination at and off the SRP (e.g., reference 6). The new EIS should not only assess the correctness of ERDA 1537, but should as well analyze the monitoring reports from 1977 to the present. Special attention should be directed to DOE releases that exceed DOE Concentration Guides and EPA drinking water standards on and off the SRP. For instance,</p>	See the response to comment B-5.
Q-15	<p>a) strontium-90 released from the F-Area seepage basins has been found to be at a groundwater concentration over eight (5) times the DOE Concentration Guides, or over 40,000 times the EPA drinking water standard, yet no reprimand has been given to Du Pont, the prime SRP contractor, because of this excess. The new EIS should detail every instance where the DOE Concentration Guides have been exceeded since plant start-up, what corrective actions have been taken and with what long-term consequences.</p>	See the response to comment B-6.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-16	Environmental Protection Agency (EPA) drinking water standards are important performance measures, regardless of whether groundwater is available or accessible as public drinking water sources, for the following reasons. The SRP has apparently not been designated a reservation to be kept from public hands for perpetuity, but is planned to be eventually returned to the public domain, yet the SRP is contaminated and cannot be released until levels of contamination do not jeopardize public safety. Thus, EPA drinking water standards provide a measure of DOE environmental performance and concomitantly the degree of remediation before the return of DOE property to the public. The new EIS should recognize the importance of EPA drinking water standards and should compare all data to applicable DOE Concentration Guides and EPA drinking water standards.	The need to dedicate existing hazardous, low-level radioactive, and mixed waste sites to ensure the protection of public health and safety is addressed in Section 2.1 of the EIS. Also, see the response to comment Q-4.
Q-17	b) The annual off plant SRP monitoring reports indicate that radioactive strontium-90 contamination in milk samples collected from around the SRP are within ranges found by the Environmental Protection Agency (EPA) (9). The SRP annual monitoring reports attribute the strontium-90 in milk from around the plant to world-wide nuclear test fall-out (9), but statistical tests comparing SRP data with regional data discredit this hypothesis. Support for this hypothesis is found in a 1984 report of a one-week study of the SRP conducted by the EPA in 1982. The EPA collected one milk sample from a dairy about 32 km northwest of SRP plant center and purportedly confirmed by their analysis that the concentration of radioactive strontium-90 in milk samples drawn from near the SRP are not significantly different from other milk samples from the southeastern U.S. (10). However, the EPA apparently did not review or overlooked the SRP annual monitoring data (9) for radioactive strontium-90 concentrations in milk (see Table 1 below). That data, collected by the Savannah River Plant in 1982, indicates that the mean strontium-90 milk concentrations, along certain wind paths, are significantly greater than the mean concentrations in southeastern U.S. milk data as published by the EPA in 1982 (11, p. 91-95). One source of the strontium-90 in milk from around the SRP may possibly be the airborne re-suspension from SRP seepage basin releases.	See the response to comment B-7.

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Comment number	Comments	Responses
Table 1		
1982 Radioactive Strontium-90 Contamination in Milk (9)		
	Mean Strontium-90 Milk Concentration, pCi/L	
1..	EPA Southeastern U.S. Data	1.8
2.	EPA Single Milk Sample around SRP (Langley, SC)*	1.8
3.	SRP Milk Data	4.1
4.	SRP Milk Data Northeast/Southwest of SRP	6.0
5.	SRP Milk Data Maximum Average (Waynesboro, GA)	7.5
6.	SRP Milk Data Maximum Reading (Waynesboro, GA)	14
7.	EPA Drinking Water Standard	8
*NOTE: The SRP milk data for 1982 for milk from Langley, SC, had an average Strontium-90 concentration of 1.6 pCi/L.		
Q-18	3. <u>Waste Management Assessments</u> The SRP waste management practices improvement program that started with the 1977 EIS (ERDA 1537), as announced in the DOE intent to prepare the new EIS, was stated to also include regular assessments and improvements to SRP waste management programs (1). A listing of all waste management assessments, including appraisals with findings and recommendations, since 1977 should be a part of the new EIS. For instance, the 1982 Savannah River Plant radioactive low level waste burial ground management	See the response to comment B-8.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
	<p>appraisal report, not published by DOE, should be included (12). This appraisal report was highly critical of DuPont's management of the SRP radioactive waste burial grounds, but not having been finalized nor transmitted to DuPont, the appraisal report became the subject of a separate hot line complaint to the DOE Inspector General (12, 13). The result of that hot line complaint and a subsequent re-appraisal as directed by the DOE Inspector General, has been to dramatically transform operations at the SRP burial grounds (14). At the same time, because there were so few Savannah River Laboratory (SRL) research recommendations for improvements to operations of the SRP burial grounds before the 1980 appraisal of the SRP radioactive waste burial grounds, also because there have been significant changes since the 1980 appraisal, including the implementation of almost all the recommendations made in the 1982 appraisal draft report (14), the SRL Laboratory's significance to radioactive waste management is questioned. The new EIS should discuss the importance of the SRL Laboratory to SRP operations, and what changes since the 1980 appraisal have occurred to make the SRL Laboratory more relevant to SRP operations.</p>	
Q-19	<p>The burial ground management appraisal report did not assess SRP seepage basins, but a 1982 radioactive high-level waste tank farm appraisal report attempted to do so and attempted to assess the long-term impacts seepage basins would have on the SRP groundwater environment (15, 16). However, that part of the high-level waste tank farm appraisal, i.e., the long term performance appraisal of the high-level waste tank farm, was stopped by DOE management (13), but in effect, part of that long-term appraisal will be assessed in the new Waste Management Activities EIS. The scope of the original long-term appraisal of the high-level waste tank farms appears to have been in some aspects more far reaching than the scope of the new EIS (16; copy attached)); the latter's scope should be expanded to cover all sources of SRP groundwater and soil contamination, including the SRP high level radioactive waste tank farm, Defense Waste Production Facility (DWPF) and DWPF waste and by-products disposal, such as saltcrete disposal.</p>	<p>See the response to comment B-9.</p>

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-20	<p>4. <u>DOE Concentration Guides</u> As stated in the recent DOE news release and Federal Register (1), the DOE wants "...to ensure continued protection of groundwater, human health and the environment." However, numerous instances have occurred at SRP where concentrations of radionuclides have exceeded the DOE Concentration Guides (17, p. 25, Table D; 18). Yet, the DOE apparently does not take steps to bring releases into the environment below levels established by these DOE Concentration Guides, nor has the DOE cited nor fined the SRP contractor when the Concentration Guides have been exceeded (19). A case in point is the \$64 million clean up cost of the M-Area basin, a cost to be paid for with tax dollars, not DuPont corporate funds. This appears to be incongruent with DOE policy.</p> <p>For example, the 1984 L-Reactor EIS reported that strontium-90 groundwater concentrations from F-Area seepage basins reached 340,000 pCi/L (5). This level of strontium-90 is 42,500 times greater than the EPA drinking water standard and over 8 times higher than the DOE Concentration Guides (17, 18). When this was discussed with DOE, the responded that the contractor was under no obligation to meet the DOE Concentration Guide for strontium-90 in groundwater (20). Putting aside, for the moment, the question of whether the DOE Concentration Guides themselves provide satisfactory protection to human health and the environment, exceeding those DOE Concentration Guides assuredly cannot protect anything. Since DOE still self-regulates nuclear wastes, it would appear that these DOE Concentration Guides apparently afford both the DOE and the prime contractor a cozy relationship. The new EIS should question the efficacy of these DOE Concentration Guides and whether, in the best interests of the public, these guidelines should be replaced with regulations that bite.</p> <p>In 1984, the federal court removed the DOE's right to self regulate hazardous chemical wastes (4) after the largest industrial spill of mercury occurred at the DOE Oak Ridge facility (20, 21). The new EIS is a good, first step</p>	See the response to comment B-10.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
	forward for the DOE to recoup lost credibility, but it must be strongly reinforced with a cost-efficient, professional operation that cleans up the SRP environment and keeps it clean. To do so is in the best interests of the public, and it makes good business and engineering sense as well. The DOE can ill afford another cover-up.	
Q-21	5. <u>Remedial Action Programs</u> The M-Area remedial action program to manage and control existing groundwater contamination was included in the L-Reactor EIS (5), but it has not been central to the subject of an EIS until now, yet corrective action alternatives to the M-Area basin clean up apparently do not exist because remediation has already begun (4, 5). The new EIS is a fine idea, but it comes after the fact for deciding the appropriate course of action for the M-Area seepage basin clean-up, and for allowing public input into that decision, unless, with the new EIS, the DOE is now offering the public this opportunity. The M-Area seepage basin clean-up will jettison an estimated 30 tons per year of chlorinated hydrocarbons into the atmosphere at one of the most populated work areas on the SRP plant site (4, 5). It is appropriate that the public have the right to question the Savannah River Plant scientists and engineers on the decision to allow airborne releases of these potentially hazardous chemicals within the SRP manufacturing and administration areas.	See the response to comment B-11.
Q-22	The SRP Groundwater Quality Protection Program discussed the removal of highly contaminated soil and chemical and pesticide hazardous waste from the CMP seepage basins for transport, storage and disposal elsewhere (7). This remedial action should similarly be a part of the new EIS, especially if highly contaminated wastes will be or have been transported and disposed offsite the SRP plant site.	See the response to comment B-12.
SPECIFIC COMMENTS		
Q-23	1. As part of the new EIS, the 1983 technical summary document, <u>The Technical Summary of Groundwater Quality Protection Program at Savannah River Plant</u> , Volumes I and II, should be up-dated and corrected where necessary (7). For instance,	See the response to comment B-13.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
	the M-Area seepage basin is listed as non-radioactive instead of as a mixed waste basin, and basin 904-49G has been omitted from Figure 5-4, p. 5-11. It would be helpful to include the numbers of each type of basin or pit on page 5-7.	
Q-24	2. As part of the new EIS each new project, each remedial action program, and each current SRP program that impacts the human health and the SRP environment should be assessed for total costs, including the decontamination and decommissioning (D&D) costs for the SRP.	Impacts to human health and the environment for remedial and closure actions, new disposal facilities, and the discharge of disassembly-basin purge water are identified in Chapter 4. To the extent practicable, estimated costs associated with the alternatives are presented. A detailed discussion of decontamination and decommissioning of SRP facilities is outside the scope of this EIS.
Q-25	3. The past estimate made in 1982 for the D&D of the SRP was set between \$2-20 billion. This estimate should be up-dated and explained in detail in the new EIS.	A detailed discussion of decontamination and decommissioning of SRP facilities is outside the scope of this EIS.
Q-26	4. The estimated date that the SRP will be returned to the public domain should be provided with detailed explanations in the new EIS.	The estimated date for return of the SRP to public use is outside the scope of this EIS. Also see the response to comment Q-16.
Q-27	5. The Nuclear Regulatory Commission has inferred in its Plant Vogtle Environmental Statement that Vogtle environmental impacts can be assessed independently of SRP releases (11, p. 9-27), and the consequences of combined environmental effects are in essence not a part of their review process. To the credit of DOE, the L-Reactor EIS made such an assessment (5). However, who ultimately is responsible to study the combined effects of all releases into the environment from all sources?	Section 4.7 discusses the cumulative effects of the alternatives considered in combination with the effects of other existing and planned facilities on and near the SRP.
Q-28	6. A 6000 curie cesium-137 source and cobalt-60 sources were left unattended in the SRP environment for a number of years before being disposed in the SRP burial ground. This should be discussed including environmental impacts.	Remedial and closure actions for the burial ground are discussed and assessed in Sections 2.2 and 4.2 and Appendixes B and F.
Q-29	7. Allied General Nuclear Services (AGNS) has had transuranic waste sent to SRP for disposal. The significance of this action should be discussed.	The purpose of the EIS, as announced in the <u>Federal Register</u> , is to assess the potential environmental effects of the modifications of waste management activities for hazardous, low-radioactive, and mixed wastes. A discussion of high-level and transuranic wastes is outside the scope of this EIS.

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Comment number	Comments	Responses
Q-30	8. Reported SRP airborne data for the release of tritium appears to be confounded by the lack of timely and relevant meteorological data, e.g., concomitant humidity readings (17 p. 10-12). This should be discussed.	Data in SRP monitoring reports have been used in the preparation of the EIS. Revisions to the monitoring reports to provide absolute humidity during periods of data collection - which can be derived by a division of data provided - is not within the scope of this EIS.
Q-31	9. The SRP data published in annual monitoring reports (also, cf. 5, 7) is not unified nor understandable nor conclusive but selective; nor does the data display ranges nor significant statistics of the data base. Data published in the future by SRP, especially in this EIS, should provide a means of the data base available for a particular observation (for instance, strontium-90 groundwater concentrations under F-Area seepage basins), a range of the data, number of data sources in the data base, and pertinent data statistics (e.g., standard deviations), and comparisons of the data to EPA drinking water standards, DOE Concentrations Guides, and other applicable standards. This problem is endemic in all SRP reports, but two examples will be given in addition to Specific Comment No. 8: First, the maximum level of gross beta contamination in wells sampling ground water underlying the F-Area seepage basin was reported to be 8,000 pCi/L in the May 1984 L-Reactor EIS (5, pp.F-88 and M-112) but in the 1981 Annual At-The SRP Monitoring Report (18) published in April 1984, the maximum level was reported to be 330,000 pCi/L, a level over forty times greater than the first level; this is significant because SRP took particular exception to an earlier comment about water contaminated at the 8,000 pCi/L level being used for drinking water (5, p. M-112), all the while having knowledge that the actual level of contamination was much higher, knowledge the commentor did not have; but this is significant for the more compelling reason that SRP has not published a range so that even the 330,000 pCi/L level may not be the maximum (viz., strontium-90 has been reported in this same area, 1-3 miles downstream, to reach a level of 340,000 pCi/L at outcrop (5, p. F-84; 19)).	See the responses to comments B-4, Q-8, and Q-30. The format and content of the annual monitoring report has been changed for 1984.

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	Second, data is often published in a meaningless, but authoritative fashion, such as the inventory in pounds of lead or mercury in a core sample but without supporting data to determine concentrations and/or significance (7, p. 6-30); or such as collected rainwater concentrations of radioactive contamination per square area, but without supporting data that would allow the calculation of volume concentrations effectively preventing the determination of whether or not standards have been violated (18, p. 93-94). On the one hand, this gives the appearance of DOE's honesty in publishing so much information, but on the other hand, information presented in gibberish is of little value.	
K-87 Q-32	10. SRP data do not include the releases of all hazardous chemical and radioactive nuclides at the SRP. Nor is the data displayed in an understandable and accessible form. This should be corrected.	See the responses to comments B-4, Q-8, Q-30, and Q-31.
Q-33	11. Data averages should not be reported without providing the significance to those averages, i.e., ranges, standard deviations, etc.	See the responses to comments B-4, Q-8, Q-30, and Q-31.
Q-34	12. The high-level waste (HLW) tank corrosion pitting problem at SRP has not been adequately addressed in an EIS and should be in this EIS in light of the continuing problem observed in the Type IV tanks; and second, because HLW tanks 25-28 are new type III tanks that went into operation after the corrosion pitting was found in the remaining Type III tanks, tanks 25-28 should be assessed for potential corrosion pitting problems in this EIS. Tanks 25-28 were not cleaned nor treated for the corrosion pitting as the other new Type III HLW tanks were. The performance of the SRP HLW tanks since the corrosion pitting incidences should be reviewed as well (5).	See the response to comment Q-29.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-35	13. In December, 1982 in private discussions within DOE management, doubt was expressed by DOE management for the need of the DWPF facility. However, apparently to induce Congress to fund the DWPF, the estimated cost was reduced from around \$3 billion to \$1 billion, and the proposed cost for new HLW tanks (FY-1984 request) were more than doubled from past HLW tank costs (23), both as extraordinary but apparently effective inducements. Will the cost for the DWPF remain at \$1 billion? Could the DWPF have been built within the existing HLW tank farm system without the expenditure of \$1 billion?	See the response to comment Q-29.
Q-36	14. The National Academy of Sciences (NAS) was highly critical of the DWPF in their analysis of the DWPF, although based on data provided to the Academy by SRP (24). This new EIS should formally address the NAS criticism and justify the tax expenditures for solidifying the SRP high level waste before a geologic repository will be available, especially comparing the cost of storing the solidified HLW until such a repository is available against having waited until the repository would have been concurrently available before constructing the DWPF. This analysis should use actual HLW tank costs and not the inflated costs in the proposed congressional line item No. 84-SR-037 (23).	See the response to comment Q-29.
Q-37	15. The L-Reactor EIS (5; and other documents: e.g., cf., 6, 7) reviewed the groundwater concentrations of chlorinated hydrocarbons in the M-Area, but made only passing reference to unspecified hydrocarbons in other areas of the plant (cf. 5, p. M-270). This should be detailed by specific type wherever they exist. As well, all hazardous chemicals and potentially hazardous chemicals should be assessed and listed in the published data tables in the new EIS. The data tables for a particular monitoring well should include all chemicals and radionuclides in one table per well, in an easily accessed manner. (Compare the difficulty of determining the significance of the data listed in the L-Reactor EIS, Tables F-14 and F-15 with pages F-85 ad F-99, reference 5.)	This EIS characterizes the radiological and chemical composition of waste sites in Appendix B, including those sites having significant concentrations of chlorinated hydrocarbons. Also see the responses to comments B-4 and Q-8.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-38	16. In a 1981 internal DOE memorandum (25), DOE stated "...present SRP burial ground operations do not comply nor are they compatible with RCRA hazardous waste regulations if applied to mixed hazardous wastes." Part of the reason for noncompliance is that SRP used underground tanks to store hazardous chemical wastes (5, 7, 8). What is being done to correct this problem?	See the responses to comments A-16 through A-19 and comment Q-29.
Q-39	17. The low level waste (beta-gamma) incinerator has not been publicly reviewed in an EIS and should be assessed in this EIS. Costs (construction and operational), airborne and solid releases, and a comparison to applicable standards should be provided. The types of materials incinerated along with appropriate experimental statistics of the incineration process should be provided and discussed.	Chapter 1 discusses the low-level (beta-gamma) waste incinerator and other approved projects that are being implemented. Appendix D also discusses the use of incinerators as a predisposal technique. Section 4.3 assesses alternative new disposal facilities for wastes, including ash from incinerators.
Q-40	18. In the past, despite legal requirements to do so, the DOE has apparently tended not to publish fully, e.g., discrepancies between public SRP monitoring reports versus internal SRP monitoring reports (13, 14); SRP slider-turtle radioactive strontium-90 contamination (6, 13); and, SRP plutonium-238 contaminated combustible waste generation of dangerous levels of hydrogen gas (14). The new EIS should review what safeguards DOE has implemented to assure the public that the public's interests and right-to-know will be protected.	See the responses to comments Q-3 and Q-7.
Q-41	19. The environmental impact at SRP of DOE 5820.2 as a change from AEC 0511, Radioactive Waste Management (26), should be assessed within the new EIS.	See the response to comment Q-1.
Q-42	20. The new EIS should assess the cost and impact of having the SRP regulated by the NRC and the EPA for SRP radioactive waste management. Differences between commercial regulations and DOE regulations should be highlighted. The DOE should justify its right to self-regulate radioactive wastes.	The cost and impact of having the SRP regulated by the NRC is outside the scope of this EIS. Compliance of new low-level radioactive disposal facilities with applicable regulations is discussed in Section 4.3.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-43	21. The new EIS should explain what is happening to congressional underrun funds from SRP construction projects, whether or not underrun funds are turned back to the U.S. Treasury, and if so how much, whether or not underrun funds discourage cost efficiencies, whether or not construction cost indexes on waste management construction projects should be published, and whether or not funding abuses have occurred in the past at SRP (23).	These comments are not within the scope of this EIS.
Q-44	22. The effectiveness of the various environmental release and dose consequence models used by SRP should be discussed in the new EIS, especially calibration and validation of the models (e.g., NOAA models, DOSETOMAN, etc.).	The 1984 annual monitoring report discusses the use of environmental release and dose consequence models, in addition to quality assurance and validation. The EIS discusses assumptions and methods used to calculate radiological doses presented in Appendix H.
Q-45	23. The SRP decided (27) in 1977 to continue the use of seepage basins at SRP, despite the 1973 AEC regulation requiring seepage basins and other natural soil columns, not allowed in the commercial sector, to be phased out (26). Considering the \$64 million clean up costs of the single M-Area seepage basin (4), that the DOE no longer prohibits the use of seepage basins and natural soil columns (3), and that the L-Reactor will enter into service another seepage basin this year (5), discuss in the new EIS why the DOE feels it is acting in the best interest of the public in the protection of the SRP environment, especially the groundwater underlying SRP (cf. the DOE policy, reference 5, p. F-111).	See the response to comment Q-2.
Q-46	24. The planned EIS should justify the disposal of saltcrete in the SRP environment and should discuss predicted groundwater levels of contamination directly under the saltcrete.	The disposal of saltcrete from the DWPF was assessed in the final EIS for the Defense Waste Processing Facility (DOE/EIS-0082) and is not within the scope of this EIS. Immobilization of other low-level radioactive waste in saltstone or concrete monoliths is discussed in Appendix D.
Q-47	25. The SRP proposed FY 1985 budget proposed reducing the number of groundwater monitoring wells observing the migration of radionuclides migrating from the SRP low level radioactive waste burial grounds (13). Discuss whether or not this cut back was effected and justify the cut back in light of the indicated increasing levels of radionuclide migration in the SRP burial grounds between 1977 and 1981 (8, 13, 18).	Chapter 5 discusses ongoing and planned monitoring programs.

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
Q-48	26. Discuss the status of the transuranic (TRU) combustible waste generation of hydrogen gas problem and the concerns of the transportation over public highways of this TRU combustible waste to the WIPP facility in New Mexico.	See the response to comment Q-29.
Q-49	27. Discuss the operational usage of all 51 HLW tanks at SRP. Discuss the concerns of using cooling well water in the HLW tank farm with water drawn from the important Tuscaloosa aquifer, especially discussing the potential pathway for contaminants into the aquifer via these cooling water wells.	See the response to comment Q-29.
Q-50	28. What is the disposition of the SRP inventory of 32,536,000 pounds of depleted ^{235}U ? What are the environmental consequences at SRP of having retained this material at SRP?	Inventories of SRP material that are not wastes are not within the scope of this EIS.

REFERENCES

1. Department of Energy,, Waste Management Activities for Groundwater Protection at the Savannah River Plant, Aiken, SC; Intent to Prepare an Environmental Impact Statement, Federal Register, 50 (81), 16534-16535 (1985).
2. Letter to C. Benge, Inspector, DOE Inspector General's Office, from W. F. Lawless, "DOE Order 5820.1 (Management of Transuranic Contaminated Material) and draft DOE Order 5820, Radioactive Waste Management," August 27, 1983.
3. U.S. Department of Energy Order 5820.2, Radioactive Waste Management (1984).
4. Department of Energy Acting to Control Hazardous Waste at its Savannah River Nuclear Facilities, U.S. General Accounting Office report to the Honorable Ernest F. Hollings, United States Senate, Rep. GAO/RCED-85-23 (1984).
5. Final Environmental Impact Statement, L-Reactor Operation, Savannah Rier Plant, Aiken, SC, U.S. Department of Energy 3-Volume Rep. DOE/EIS-0108 (1984).

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
6.	<u>Environment Monitoring at the Savannah River Plant, Annual Report for 1982</u> , Savannah River Plant Rep. DPSPU 83-302 (1984).	
7.	<u>Technical Summary of Groundwater Quality Protection Program at Savannah River Plant, Volume I, Site Geohydrology and Solid Hazardous Wastes</u> , a Savannah River Plant Rep. DPST-83-928 (1983).	
8.	<u>Final Environmental Impact Statement, Waste Management Operations, Savannah River Plant, Aiken, SC</u> , U.S. Energy Research and Development Administration Rep. ERDA-1537 (1977).	
9.	<u>Environmental Monitoring in the Vicinity of the Savannah River Plant, Annual Report for 1982</u> , Savannah River Plant Rep. DPSPU 83-30-1 (ca. 1983).	
10.	<u>An Airborne Radioactive Effluent Study at the Savannah River Plant</u> , a U.S. Environmental Protection Agency Rep. 520/5-84-012 (1984).	
11.	<u>Final Environmental Statement Related to the Operation of Vogtle Electric Generating Plant, Units 1 and 2</u> , a U.S. Nuclear Regulatory Commission Rep. NUREG-1087 (1985).	
12.	<u>W.F. Lawless, Savannah River Plant (SRP) Burial Ground, Building 643-G, Management Appraisal Report, Appraised June 2-13, 1980</u> , a U.S. Department of Energy Savannah River Operations Office draft report (1982).	
13.	Letter to C. Benge, Inspector, Department of Energy, Inspector General's Office, from W. F. Lawless, <u>SRP Burial Ground Appraisal Report (BGAR)</u> , August 4, 1983.	
14.	The Department of Energy, Savannah River Operations Office response to the August 13, 1984 letter from Congressman John Dingell to Secretary Donald R. Hodel. The update of the 1980 Burial Ground Appraisal report is Attachment 4.B.	

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
15.	W. F. Lawless, K. G. Brown, <u>Management Appraisal Report, Savannah River Plant (SRP) Tank Farm</u> , a U.S. Department of Energy Savannah River Operations Office report (1981).	
16.	W. F. Lawless, K. G. Brown, B. M. Dodge, <u>Performance Audit Questions, Savannah River Plant (SRP) Tank Farm</u> , a U.S. Department of Energy Savannah River Operations Office draft report (1982).	
17.	W. F. Lawless, <u>The Savannah River Plant: Hazardous and Radioactive</u> , Comments on a Panel's Review and Findings of Ongoing Health Effects and Epidemiological Studies of Operations at the Savannah River Plant (1985).	
18.	<u>Environmental Monitoring at the Savannah River Plant, Annual Report for 1981</u> , SRP Rep. DPSPU 82-302 (1984).	
19.	Letter to R. L. Morgan, Manager, DOE-Savannah River Operations Office, from W. F. Lawless, transmitting reference 16, February 8, 1985.	
20.	C. Nandras, DOE-Savannah River Public Relations Office, personal communication, February 8, 1985.	
21.	"The Lost Mercury at Oak Ridge," News and Comment, <u>Science</u> , 221, 130-132 (1983).	
22.	B. A. Fenimore, "Atomic Bombs, Chemical Wastes," <u>Environment</u> , 26, 2-3 (1984).	
23.	Letter to A. Walters, Inspector, Department of Energy Inspector General's Office, from W.F. Lawless, <u>Change Room Facility, Building 241-58H, S-3932</u> , July 26, 1983. Attachment 6, FY84 Budget Validation, SRP Project No. 84-SR-037, Congressional line item for 4 high level waste tanks.	
24.	<u>Radioactive Waste Management at the Savannah River Plant: A Technical Review</u> , National Academy of Sciences Press (1981).	

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
25.	Internal DOE-Savannah River Memo Route Slip with Attachment I, comments on th possible implementation of RCRA at SRP, from T. B. Hindman, Jr., Director Waste Management Project Office, DOE-Savannah River, to W.A. Reese, Director Safety and Health Division, May 19, 1981.	
26.	U.S. Atomic Energy Commission Manual Chapter 0511, <u>Radioactive Waste Management</u> (1973).	
27.	W.L. Marter, <u>New Criteria for Seepage Basin Use</u> , a Savannah River Plant Rep. DPST-77-444 (1977).	

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
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ATTACHMENT

Performance Audit Questions
Savannah River Plant (SRP) Tank Farm

Report Date

8-12-82

W. F. Lawless
K. G. Brown
B. M. Dodge

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
<u>Personnel</u>		
1.	What is the exposure history for personnel in the tank farm and burial ground?	
2.	Incidents 241-FH-81-6, WMI-82-5-8, and WMI-81-10-21 discuss skin contamination of waste management supervisors. What training on procedures and radiation protection is required for supervisors? How can management track the level of training and correlate the number of incidents that occur to deficiencies in training? What procedures can be incorporated to reduce the "personnel error" reason offer for incidents?	
3.	Please provide us with organizational charts and responsibilities for waste operations and waste technology, as well as personnel time in the job.	
<u>Tank Farm</u>		
1.	What are the estimated curies, hazardous or potentially hazardous, and mixed substances released (initial or contained loss of control; e.g., spill) to the environment (by species, curies, volume and weight) from the tank farm, excluding the seepage basins?	
2.	DPSPU-79-302 gives the amount of radioactivity per tank farm monitoring well. What impact on groundwaters have these nuclides had? What tank farm monitoring wells are not covered in DPSPU-79-302 and what data has been obtained from these wells?	
3.	What are the yearly release guides and actual annual and cumulative releases for each operational unit in the tank farm (i.e., tanks, diversion boxes, etc. excluding seepage basins) since they were placed into radioactive service? Have the releases from the tank farm migrated and, if so, describe the limit of migration? Update pages 348-349 of ERDA 1537.	

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
4.	DPSTSY-200-8, pages 5-6 state that "No incidents since 1959 that resulted in or would result in ground water or surface contamination are noted in the data base." Is this saying that no incidents have happened to this effect since 1959? Please update this statement.	
5.	What is the current status (movement rate and distance) of the migrating nuclides and their long-term impact (by migrating species) around Tanks 8 and 16?	
6.	DPSPU-79-302 gives nuclide migration for the area around Tank 8. What other nuclide migration is there in and around the tank farm? Please provide any trend analyses that have been made on these areas.	
7.	What are the yearly release guides and actual releases for each evaporator? Characterize the releases (i.e., liquid and airborne amounts by radioactive species and curies). Describe the monitoring methods for evaporators. Are evaporators inspected routinely for leaks, cracks, etc.?	
8.	What is the status of the waste tank farm transfer system? What is the condition of the operational units and their expected remaining life time, i.e., diversion boxes, evaporators, etc.? Are all systems presently operational? What are the retirement and D&D plans? (Include the interarea transfer line.)	
9.	Please provide us with the latest list of waste management DP SOPs and DP SOLs.	
10.	Is chloride induced tape employed anywhere in the tank farm? Is it used on stainless steel? If so, where?	
11.	Are air flow monitors installed in transfer lines to assure proper connections are made? If not, how are proper connections determined?	

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
12.	For each of the Liquid Waste Surveillance Methods listed in Figure 10, p. 22, of the SRP Presentation to NAS panel on SRP wastes (10-17-78), what is the respective probabilistic statistical effectiveness (i.e., % known and probability assurances)? What is the probability of waste (by volumes and curies) lost into the environment or unaccounted for as a result of the balance checks? (c.f. p.6, Chromate Water Piping Leak, DPSP-81-21-6). How is the loss to the environment determined?	
13.	Please provide us with a copy of tank farm incident experience since the beginning of operations. Labelize and classify the incidents similar to those in DPSTSY-200-6, p.6-3.	
14.	What is the calculated criticality in the different tank types? How does the actual content of fissile materials in the tanks compare to this? When was the last criticality audit performed in the tank farm? What were the results of the audit?	
15.	What are your requirements and procedures for reporting spills or leaks as they relate to the Superfund Act of 1980?	
16.	What are your procedures for reporting tank farm operating incidents? When do you notify DOE? What is your follow up procedure once the problem has been resolved?	
17.	What is your preventive maintenance program for each tank farm facility and piece of equipment (specifically pumps, generators, cranes, etc)? Are failure histories maintained for performance of trend analyses? How are results of trend analyses factored back into the preventative maintenance program?	
18.	When a leak occurs in a transfer line (CTS, interarea, etc.), how is it detected then pinpointed? How long does this process take (average time, historical maximum time)? What impact does it have on operations, programs, and the environment? Can cost effective improvements be made in this area?	

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
19.	If a monitor alarm sounds during a transfer (from the canyon to a pump pit, pump pit to tank, tank to evaporator, etc), is the transfer stopped? Discuss how much waste (or liquid) will continue down the line, and how long it will take to reach a final destination. Is the transfer stopped as soon as the alarm sounds?	
20.	In August and September 1981, a series of alarms occurred in H-Area Leak Detection Box-2 (LDB-2). Initially, no radiation was found in the box and the alarms were attributed to moisture. However, when the drain downstream from the box was purged with dry air, activity from 350 to 2000 mrad was subsequently found in the box. What are your procedures for investigating a monitor alarm? Explain why the procedure failed to detect the leak in LBD-2. (DP-81-125-3).	
21.	What are the currently projected waste transfer costs and time schedule for sludge removal, salt removal, sludge processing, salt processing, and chemical cleaning? Show capital and operating costs (or design, construction), start up and completion dates by task, year, and tank.	
22.	What is the technical basis for the tank chemistry control sampling schedule? Please provide us with a copy of the schedule.	
23.	What risks are assumed by the following modifications to the operating criteria of the tank farm: <ul style="list-style-type: none"> a. Use of evaporator feed tanks as low heat waste receivers; b. Use of the additional 300,000 gallons of tank space in salt tanks; c. Continued use of a Type I tanks in F-area as an emergency spare; and 	

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses																														
	d. Use of one Type III tank as an emergency spare to cover both F and H areas?																															
	Will an additional Type III tank be used when one is eventually emptied?																															
24.	Why is the interarea line inadequate for transferring processed sludge from F to H area, but is adequate when using only one Type III tank as an emergency spare for both areas?																															
25.	What is the impact of the out-of-specifications thicknesses on the longevity of Tanks 35 and 36? What is the impact of the out-of-specifications flatnesses on the longevity of Tanks 43 and 50?																															
26.	Are Type III encasements (cement-asbestos jackets) used for transfer line designs today? Are there any Type III encasement lines in use today? If so, are the rubber seals checked routinely for degrading? (DPSTSA-200-3, p.3.171).																															
27.	In the April 1982 Waste Management Programs Report (DPSP 82-21-4), Tables 4 and 14 give the following data:																															
	<table><tr><td></td><td colspan="2"><u>Table 4 (gal)</u></td><td colspan="2"><u>Table 14 (gal)</u></td></tr><tr><td></td><td>F-Area</td><td>H-Area</td><td>F-Area</td><td>H-Area</td></tr><tr><td>Evaporator Feed</td><td>541,585</td><td>389,378</td><td>525,000</td><td>338,000</td></tr><tr><td>Concentrate</td><td>360,301</td><td>297,782</td><td>403,000</td><td>245,000</td></tr><tr><td>RBOF fed to CRC</td><td>215,970</td><td>0</td><td>224,000</td><td>114,000</td></tr><tr><td>Seepage Basin</td><td>238,670</td><td>141,650</td><td>230,000</td><td>114,000</td></tr></table>		<u>Table 4 (gal)</u>		<u>Table 14 (gal)</u>			F-Area	H-Area	F-Area	H-Area	Evaporator Feed	541,585	389,378	525,000	338,000	Concentrate	360,301	297,782	403,000	245,000	RBOF fed to CRC	215,970	0	224,000	114,000	Seepage Basin	238,670	141,650	230,000	114,000	
	<u>Table 4 (gal)</u>		<u>Table 14 (gal)</u>																													
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Seepage Basin	238,670	141,650	230,000	114,000																												
	Why are the figures in these tables different? What are the correct figures? What method is used in previewing draft copies of the monthly report to preclude these types of discrepancies?																															

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
28.	In construction, what are your criteria and procedures for accepting design variances to construction specifications? Are design variances separated into critical and non-critical acceptance procedures? If so, how is this categorization determined and put into practice? Specifically discuss the criteria and procedures for accepting variances in Tanks 43 and 50. Be sure to include a discussion as to why a variance was chosen rather than complying with specifications.	
29.	What are your management controls that assure DOE that a subcontractor is meeting requirements? Explain how these controls were exercised in the following cases:	
	a. Failure to meet flatness specifications in Tanks 43 & 50?	
	b. Discovery of a rolling defect in Tank 45;	
	c. Insufficient gritblasting in most tanks, an overblasting in Tanks 38 and 41; and,	
	d. Stress relieving Tank 50 twice.	
	Answer specifically:	
	1. Why did these problems occur?	
	2. Who corrected these problems (if corrected)?	
	3. Was the subcontractor held responsible financially?	
	4. Were the best interests of the government taken care of in this cost conscious period?	

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
30.	The QA audit of Tank 45, DPSP 80-72-2 (3-5-80), checklist 2, states that "Plates shall be inspected for cold laps, surface imperfections, stringer separation at edges." It further states that the primary plates were inspected, defects identified and repaired. However, on 5-1-81, a defect was found on the tank bottom after gritblasting for pit inspection. Subsequent repair and inspection concluded that the defect was "a rolling defect in the original plate." (Metallurgical Report, 12-15-81, "Linear Defect Repair - Waste Tank 45). According to the audit, this defect should have been catalogued and repaired. Who performs your quality assurance inspections? Are they chosen by qualifications, i.e., an electrical engineer inspects electrical systems, a metallurgist inspects for material defects, etc.?	
31.	In Tank 38, a source of communication between the primary and annulus tanks resulted when a design change made in the field was not coordinated with construction procedure changes. What are your procedures for coordinating design changes with the other organizations involved in the project?	
32.	Every new tank built at SR is redesigned. Is this cost effective and efficient? The planned FY 1984 waste tank design costs are estimated at \$9,400,000 compared to a design costs of \$3,715,000 (based on 8.84% on \$42M) for Tanks 41 and 51. Since the FY 84 tanks are duplicates of the last tanks built, why isn't there a decrease in cost due to economies of scale? Why are the tank costs escalated at the last tanks' authorized cost instead of the actual costs? In addition, since inflation is abating and is expected to be lower than a double digit rate, why have the FY 1984 tanks' projected costs been escalated at ____ %?	

(figures are based on conceptual design reports)

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
33.	Since January 1982, water or water marks have been observed in the annuli of 21 of the 43 double wall waste tanks (8 tanks are single wall). What is the cause of this inleakage? How is the cause determined? How is the problem corrected? How can you assure secondary containment if inleakage has occurred? Why weren't these errors (in Tanks 38-51) detected and corrected during tank fabrication and prior to tank service?	
34.	During construction of Tanks 38-51, chemically treated plywood placed on tank floors for protection resulted in ferrous orthophosphate pitting of the floors. Also, modifications to mechanical agitation pump motor stands resulted in broken shafts. Additionally, decontamination efforts of a failed feed pump in 299-H severely damaged the motor (draft WM operations and surveillance monthly report, July 1982, p.10). What are your procedures for evaluating safety methods for potential detrimental effects?	
	<u>Seepage Basins</u>	
1.	How long does it take tritium and groundwater to move from the seepage basins to Four Mile Creek? Specifically, show how these migration rates are determined.	
2.	What are the yearly release guides and releases, annual and cumulative, to the seepage basins (F, H, and combined)? What are the yearly release guides (migrated) and releases, annual and cumulative, from the seepage basins to Four Mile Creek (F, H, and combined)? How many times have the absolute limits been exceeded in the history of the seepage basins? What measures are taken if the releases exceed the release guides in any year? What is the justification for the action?	
3.	One of the basins in H-area has been "abandoned in place". What provisions have been made to stop airborne contamination? Similarly, what is done to stop airborne releases from the exposed, dried out portions of the basins?	

Table K-2. Scoping comments and DOE responses

Comment number	Comments	Responses
4.	What are your closure plans for the seepage basins (as requested by SCDHEC)? When will these plans be completed?	
5.	What is the status of the migration of nuclides and hazardous elements in retention and seepage basins? The following elements are known to be in the basins: Ru-103, 106; Cs-137; H ₃ ; Ce-144, 141; Sr-89, 90; Zr-95; Nb-95; I-131; Pu-238, 239; and U-238. What other elements and compounds are in the basin and in the environment (classify as to radioactive, hazardous, mixed, and unknown impact with estimated volumes, weights, and curies)? Also, what has migrated to Four Mile Creek by monitoring results?	
6.	How are overflow constraints for seepage basins enforced to maintain the level within 8 inches of the top? Is there a correlation with discharge amount? What are the backup systems for overflow and basin leakage? Please provide a list of overflow incidents and their impact on the environment (include migration, settlement of elements, resuspension, curies and biological parameters).	
7.	Are non-radioactive or mixed materials sent to the seepage basins monitored routinely? What are the results of chemical analyses on fluid sent to seepage basins? Are all chemicals identified? What are the release guides for these chemicals sent to the seepage basins? What non-radioactive or mixed contaminants have been found in the SRP monitoring program? (DPST-77-444, p.12).	
8.	The chemicals that would be released if fluid was sent directly to Four Mile Creek instead of seepage basins would exceed NPDES requirements. When fluid is sent directly to Four Mile Creek, what analyses is made to verify that the non-radioactive chemicals are in compliance with NPDES requirements? What type of fluid is sent directly to Four Mile Creek? What are the Four Mile Creek monitoring results? (Meyer to Stetson, 9-26-77).	

Table K-3. Scoping Topics and Appropriate EIS Sections

Comment number	Scoping topic	EIS section
A-1	Regulatory requirements	Ch. 6
A-2	Regulatory requirements	Ch. 1, 6
A-3	Regulatory requirements	Ch. 6
A-4	Regulatory requirements Future laws/regulations	Ch. 6 Outside the scope of this EIS
A-5	Affected environment Environmental studies	Ch. 3, Appendixes A and B Ch. 5
A-6	Waste site characterization	Appendix B
A-7	Waste site characteristics	Ch. 2, 4
A-8	Changes in waste generation	2.3.2, 4.3.1
A-9	Predisposal technologies	2.3.2, 4.3.1, Appendix D
A-10	Predisposal technologies	2.3.2, 4.3.1, Appendix D
A-11	Predisposal technologies	2.3.2, 4.3.1, Appendix D
A-12	Research studies	Outside the scope of this EIS
A-13	Regulatory requirements	Ch. 6
A-14	Affected environment Regulatory requirements	Appendix B, Chapter 3 Ch. 6
A-15	Transportation of waste Regulatory requirement	4.5 Ch. 6
A-16	Waste storage	2.3, 4.3
A-17	Changes in waste storage	2.3, 4.3
A-18	Regulatory requirements	Ch. 6
A-19	Regulatory requirements	Ch. 6
A-20	Waste site characterization	Appendix B
A-21	SRP disposal of waste generated offsite	2.3, 4.3

Table K-3. Scoping Topics and Appropriate EIS Sections (continued)

Comment number	Scoping topic	EIS section
A-22	Affected environment Environmental monitoring Waste site characterization Assessment of impacts	Ch. 3, Appendix A, B Ch. 5 Appendix B Ch. 4, Appendixes F and G
A-23	Environmental impacts Health effects Accident analysis	Ch. 2, 4, Appendixes F through I 4.7, Appendix I 4.5
A-24	Environmental impacts Health effects Affected environment	4.7 4.7, Appendix I Ch. 3, Appendixes A and B
A-25	Environmental monitoring	Ch. 5
A-26	Ecological impacts	Ch. 4
A-27	Regulatory compliance	2.1, Ch. 6
A-28	Atmospheric effects	Ch. 3, 4.2, 4.3
A-29	Current compliance status	Ch. 1
A-30	Regulatory requirements	Ch. 6
A-31	Regulatory requirements	Ch. 6
A-32	Environmental monitoring	Ch. 5
A-33	Regulatory requirements Environmental monitoring	Ch. 6 Ch. 5
A-34	Regulatory requirements Remedial and closure alternatives	Ch. 6 2.1, 4.2, Appendixes B and F
A-35	Regulatory requirements Remedial and closure alternatives	Ch. 6 2.1, 4.2, Appendixes B and F
A-36	Permitted facilities Regulatory requirements	Ch. 1 Ch. 6
A-37	Regulatory requirements Implementation schedules	Ch. 6

Table K-3. Scoping Topics and Appropriate EIS Sections (continued)

Comment number	Scoping topic	EIS section
A-38	L-Reactor EIS	Ch. 1
A-39	L-Reactor EIS	Vol. 3 of the L-Reactor EIS
A-40	Regulatory requirements	Ch. 6
A-41	Regulatory requirements	Ch. 6
A-42	Predisposal technologies	2.3.2, 4.3.1, Appendix D
A-43	Predisposal technologies	2.3.2, 4.3.1, Appendix D
A-44	Regulatory requirements	Ch. 6
A-45	Environmental impacts	Ch. 4
A-46	Unavoidable and irreversible impacts	4.9
A-47	Regulatory requirements	Ch. 6
A-48	State authority for regulating waste	Ch. 6, Memorandum of Understanding
B-1	Regulatory requirements	Ch. 6
B-2	Remedial and closure alternatives New disposal facility alternatives Disassembly-basin purge water alternatives	2.1, 2.2, 4.2, Appendixes B and F Appendix G 2.4, 4.4
B-3	Health effects	Ch. 4, Appendix I
B-4	Affected environment	Ch. 3, Appendix A, Appendixes F through H
B-5	Environmental monitoring	Ch. 5
B-6	Remedial and closure alternatives	2.1, 2.2, 4.2, Appendix F
B-7	Atmospheric effects	4.2, 4.3, 4.7
B-8	Remedial and closure alternatives	2.1, 2.2, 4.2, Appendixes B and C
B-9	High-level radioactive waste	Outside the scope of this EIS

Table K-3. Scoping Topics and Appropriate EIS Sections (continued)

Comment number	Scoping topic	EIS section
B-10	Emission limitations	Ch. 6
B-11	Ongoing remedial actions	Ch. 1
B-12	Ongoing remedial actions	Ch. 1
B-13	Use of current data	EIS will use most current data available
D-1	High-level radioactive waste	Outside the scope of this EIS
D-2	High-level radioactive waste	Outside the scope of this EIS
D-3	High-level radioactive waste	Outside the scope of this EIS
E-1	Role of contractor in preparing EIS	Vol. 3 of the L-Reactor EIS
E-2	Environmental monitoring	Ch. 5
E-3	Environmental monitoring	Ch. 5
E-4	Groundwater contamination	Appendixes A and H
E-5	Ongoing remedial actions	Ch. 1
	Groundwater/surface-water relationships	3.4, 3.5, Appendix A
	Remedial and closure actions	2.1, 2.2, 4.2
E-6	Groundwater contamination	4.2, Appendix F, H
E-7	Health effects	Ch. 4, Appendix I
E-8	Regulatory requirements	Ch. 6
G-1	New disposal facility alternatives	2.3, 4.3
G-2	Affected environment	Ch. 3, Appendixes A and B
	New disposal facility alternatives	2.3, 4.3
G-3	Regulatory requirements	Ch. 6
G-4	New disposal facility alternatives	2.3, 4.3
G-5	Future laws/regulations	Outside the scope of this EIS
G-6	New disposal facility alternatives	2.3, 4.3

Table K-3. Scoping Topics and Appropriate EIS Sections (continued)

Comment number	Scoping topic	EIS section
G-7	Environmental monitoring	Ch. 5
G-8	New production reactor New disposal facility alternatives Affected environment	Outside the scope of this EIS 2.3, 4.3 Ch. 3, Appendixes A, F through H
I-1	Waste site characterization High-level radioactive waste Health effects	Appendix B Outside the scope of this EIS 4.1, 4.2, 4.3, annual monitoring
I-2	Health effects	4.2, 4.3 4.4, Appendix I
I-3	Independent health effects study	Study needs evaluated by Centers for Disease Control, U.S. Department of Health and Human Services
I-4	Transportation of waste	4.5
J-1	Independent health effects study	Study needs evaluated by Centers for Disease Control, U.S. Department of Health and Human Services
K-1	Surface/groundwater impacts Cumulative hydrologic impacts	4.2, 4.3, 4.4 4.7
K-2	Endangered species Endangered species	4.2, 4.3, 4.7 Ch. 6
K-3	Regulatory requirements	Ch. 6
K-4	Environmental monitoring requirements Regulatory requirements	Ch. 5 Ch. 6
L-1	Current waste management projects Regulatory requirements	Ch. 1 Ch. 6
L-2	Regulatory requirements	Ch. 6
L-3	Remedial and closure alternatives Environmental impacts Environmental monitoring	2.1, 2.2 4.2 Ch. 5
L-4	Groundwater monitoring	Ch. 5

Table K-3. Scoping Topics and Appropriate EIS Sections (continued)

Comment number	Scoping topic	EIS section
L-5	Regulatory requirements	Ch. 6
L-6	Burial of decommissioned naval reactors	Outside the scope of this EIS
	New production reactor	Outside the scope of this EIS
L-7	Alternatives	Ch. 2, 4
M-1	Regulatory requirements	Ch. 6
N-1	Regulatory conflicts	1.1, 1.2, Ch. 6
N-2	Regulatory requirements	Ch. 6
N-3	Regulatory requirements	Ch. 6
N-4	Future laws/regulations	Outside the scope of this EIS
N-5	Predisposal technologies	Appendix D
N-6	Offsite treatment, storage, and disposal facilities	Evaluated in another EIS
N-7	Regulatory conflicts	1.1, 1.2, Ch. 6
O-1	Regulatory requirements	Ch. 6
	Environmental monitoring	Ch. 5
O-2	Current waste management projects	Ch. 1
	Regulatory requirements	Ch. 6
	Environmental impacts	4.2
O-3	Analysis of alternatives	Ch. 2
	L-Reactor seepage basin	Evaluated in another EIS
O-4	Response to comments	Appendix K
P-1	Waste material generated, stored, and disposed of onsite	2.3.2, 4.3.1
P-2	Regulatory requirements	Ch. 6

Table K-3. Scoping Topics and Appropriate EIS Sections (continued)

Comment number	Scoping topic	EIS section
Q-1	EIS for DOE Order 5820.2	Outside the scope of this EIS
Q-2	Remedial and closure alternatives	2.1, 2.2, 4.2
	Disassembly-basin purge water alternatives	2.4, 4.4
	Analysis of alternatives	Ch. 2, 4.2, 4.3, 4.4
Q-3	Professional review of EIS	Copies of draft EIS provided to Federal and State agencies having special areas of expertise
Q-4	Regulatory requirements	Ch. 6
	Remedial and closure alternatives	2.1, 2.2, 4.2, and Appendix F
Q-5	Professional review of EIS	See Q-3
Q-6	Environmental impacts	2.2, 2.3, 2.4, 4.2, 4.3, 4.4, 4.7
Q-7	Regulatory requirements	Ch. 6
Q-8	Content and quality of data in EIS	EIS will comply with requirements and intent of 40 CFR 1502.2
Q-9	EIS for DOE Order 5820.2	Outside the scope of this EIS
Q-10	Analysis of alternatives	Ch. 2, 4.2, 4.3, 4.4 Appendixes F, G
Q-11	Health effects	Ch. 4
Q-12	Groundwater contamination	Ch. 3, Appendixes A, F through I
Q-13	Modification of the NEPA process	Outside the scope of this EIS
Q-14	Environmental monitoring	Ch. 5
Q-15	Remedial and closure alternatives	2.1, 2.2, 4.2, Appendix F
Q-16	Regulatory requirements	Ch. 6
	Remedial and closure alternatives	2.1, 2.2, 4.2, Appendix F
	Site dedication	2.1, 4.2
Q-17	Atmospheric effects	4.2, 4.3

Table K-3. Scoping Topics and Appropriate EIS Sections (continued)

Comment number	Scoping topic	EIS section
Q-18	Remedial and closure alternatives	2.1, 2.2, 4.2, Appendix F
Q-19	High-level radioactive waste	Outside the scope of this EIS
Q-20	Emission limitations	Ch. 6
Q-21	Ongoing remedial actions	Ch. 1
Q-22	Ongoing remedial actions	Ch. 1
Q-23	Use of current data	EIS uses the most current data available
Q-24	Health effects Decontamination and decommissioning costs	Ch. 4, Appendix I Outside the scope of this EIS
Q-25	Decontamination and decommissioning costs	Outside the scope of this EIS
Q-26	Site dedication	2.1, 4.2
Q-27	Cumulative impacts	4.7
Q-28	Burial ground	2.2, 4.2, Appendixes B and F
Q-29	Transuranic wastes	Outside the scope of this EIS
Q-30	Detailed reporting of meteorological monitoring data	Outside the scope of this EIS
Q-31	Groundwater contamination Content and quality of data in EIS Detailed reporting of environmental monitoring data	Ch. 3, Appendixes A, F through I Complies with requirements and intent of 40 CFR 1502.2 Outside the scope of this EIS
Q-32	Monitoring data content and format	Outside the scope of this EIS
Q-33	Monitoring data format	Outside the scope of this EIS
Q-34	High-level radioactive waste	Outside the scope of this EIS

Table K-3. Scoping Topics and Appropriate EIS Sections (continued)

Comment number	Scoping topic	EIS section
Q-35	Defense Waste Processing Facility	Outside the scope of this EIS
Q-36	Defense Waste Processing Facility	Outside the scope of this EIS
Q-37	Waste site characterization	Ch. 3, Appendixes A, B, F through I
Q-38	Affected environment-waste storage	2.3, 4.3
	Environmental impacts of retrievable waste storage	2.3, 4.3
	Regulatory requirements	Ch. 6
Q-39	Compliance status of incinerators	Ch. 1
	Incinerators as predisposal technique for reducing waste volume	Appendix D
	New disposal facility alternatives	4.3
Q-40	NEPA requirements	Complies with requirements and intent of 40 CFR 1502.2
	Health effects	Ch. 4, Appendix I
	Atmospheric effects	4.2, 4.3
Q-41	EIS for DOE Order 5820.2	Outside the scope of this EIS
Q-42	Regulation of the SRP by the NRC	Outside the scope of this EIS
Q-43	Status of construction project funds	Outside the scope of this EIS
Q-44	Radiological dose assessment - models and assumptions	Appendix H
Q-45	Remedial and closure alternatives	2.1, 2.2, 4.2
	Disassembly-basin purge water alternatives	2.4, 4.4
	Analysis of alternatives	Ch. 2, 4.2, 4.3
Q-46	Defense Waste Processing Facility	Outside the scope of this EIS
Q-47	Environmental monitoring	Ch. 5
Q-48	Transuranic waste	Outside the scope of this EIS
Q-49	High-level radioactive waste	Outside the scope of this EIS
Q-50	Disposition of nonwaste products	Outside the scope of this EIS